

IN THE CLAIMS

1. (withdrawn) A method of using a machining assembly to machine a plurality of different turbine components that include a dovetail having a contoured profile, said method comprising:

removably coupling a first set of retainers into the machining assembly, the first set of retainers include an upper portion having a profile that substantially mirrors a portion of the first dovetail, and a lower portion having a profile that substantially mirrors an opposite side of the first dovetail;

coupling a first turbine component between the upper and lower portions such that the first turbine component is secured by the first set of retainers;

coupling the machining assembly into a milling machine; and

machining at least one seal groove into the dovetail of the first turbine component.

2. (withdrawn) A method in accordance with Claim 1 further comprising:

uncoupling only the first set of retainers and the first turbine component from the machining assembly;

coupling a second set of retainers into the machining assembly, wherein the second set of retainers include an upper portion having a profile that substantially mirrors a portion of a second dovetail extending from a second turbine component that is different than the first turbine component, and a lower portion having a profile that substantially mirrors an opposite side of the second dovetail;

coupling the second turbine component between the upper portion and the lower portion such that the second turbine component is secured by the first set of retainers;

coupling the machining assembly into a milling machine; and

machining at least one seal groove into the dovetail of the second turbine component.

3. (withdrawn) A method in accordance with Claim 1 wherein coupling a first set of retainers into the machining assembly comprises:

retaining the lower portion within the machining assembly using a first locking mechanism; and

retaining the upper portion within the machining assembly using a second locking mechanism different than the first locking mechanism.

4. (withdrawn) A method in accordance with Claim 1 wherein machining at least one seal groove into the dovetail comprises machining at least one seal groove into the dovetail using a cubic boron nitride (CBN) grinding wheel.

5. (withdrawn) A method in accordance with Claim 1 wherein machining at least one seal groove into the dovetail comprises machining two seal grooves into the dovetail using a cubic boron nitride (CBN) grinding wheel.

6. (currently amended) An assembly for machining a seal wire groove into a gas turbine rotor blade that includes a dovetail, said assembly comprising:

a base portion;

a body portion coupled to said base portion; and

a first set of retainers removably coupled to said body portion, said first set of retainers comprising an upper portion having a profile that substantially mirrors a portion of ~~the first~~ a first dovetail, and a lower portion having a profile that substantially mirrors an opposite side of the first dovetail, wherein said first set of retainers slidably couple to said body portion, such that said first set of retainers can be replaced by a second set of retainers that are configured to retain a second dovetail that is different from the first dovetail.

7. (original) An assembly in accordance with Claim 6 further comprising a locking mechanism configured to secure said lower portion within said body portion.

8. (original) An assembly in accordance with Claim 6 wherein said upper portion comprises a locking mechanism configured to secure said upper portion within said body portion.

9. (original) An assembly in accordance with Claim 6 wherein said body portion comprises:

a first opening sized to receive said upper portion therein; and

a second opening sized to receive said lower portion therein.

10. (original) An assembly in accordance with Claim 9 wherein said upper portion and said first opening each have a substantially rectangular cross-sectional profile.

11. (original) An assembly in accordance with Claim 9 wherein said lower portion and said second opening each have a substantially T-shaped cross-sectional profile.

12. (currently amended) An assembly in accordance with Claim 6 ~~further comprising~~ a wherein said second set of retainers ~~that is different~~ are different than said first set of retainers, said second set of retainers comprising an upper portion having a profile that substantially mirrors a portion of ~~a second~~ the second dovetail ~~extending from a second turbine component that is different than the first turbine component~~, and a lower portion having a profile that substantially mirrors an opposite side of said second dovetail.

13. (currently amended) A milling machine comprising:

an assembly for machining a seal wire groove into a gas turbine rotor blade that includes a dovetail, said assembly comprising:

a base portion;

a body portion coupled to said base portion; and

a first set of retainers removably coupled to said body portion, said first set of retainers comprising an upper portion having a profile that substantially mirrors a portion of

~~the first~~ a first dovetail, and a lower portion having a profile that substantially mirrors an opposite side of the first dovetail wherein said first set of retainers slidably couple to said body portion, such that said first set of retainers can be replaced by a second set of retainers that are configured to retain a second dovetail that is different from the first dovetail; and

a grinding wheel configured to machine at least one seal wire groove into said dovetail.

14. (original) A milling machine in accordance with Claim 13 wherein said assembly further comprises:

a first locking mechanism configured to secure said lower portion within said body portion; and

a second locking mechanism coupled to said upper portion and configured to secure said upper portion within said body portion.

15. (original) A milling machine in accordance with Claim 13 wherein said body portion comprises:

a first opening sized to receive said upper portion therein; and

a second opening sized to receive said lower portion therein.

16. (original) A milling machine in accordance with Claim 15 wherein said upper portion and said first opening each have a substantially rectangular cross-sectional profile.

17. (original) A milling machine in accordance with Claim 15 wherein said lower portion and said second opening each have a substantially T-shaped cross-sectional profile.

18. (currently amended) A milling machine in accordance with Claim 13 wherein said ~~assembly further comprises a second set of retainers that is different~~ are different than said first set of retainers, said second set of retainers comprising an upper portion having a profile that substantially mirrors a portion of ~~a second~~ the second dovetail ~~extending from a~~

~~second turbine component that is different than the first turbine component~~, and a lower portion having a profile that substantially mirrors an opposite side of said second dovetail.

19. (original) A milling machine in accordance with Claim 13 wherein said grinding wheel further comprises a cubic boron nitride (CBN) grinding wheel configured to machine two seal wire grooves into said dovetail.

20. (original) A milling machine in accordance with Claim 19 wherein said CBN grinding wheel comprises a cutting geometry that substantially mirrors a seal wire geometry.